

Title (en)

Method for performing a biochemical analysis, in particular in space

Title (de)

Verfahren zur Durchführung einer biochemischen Analyse, insbesondere im Weltraum

Title (fr)

Procédé de réalisation d'une analyse biochimique, notamment dans l'espace

Publication

**EP 2700948 A1 20140226 (DE)**

Application

**EP 13175746 A 20130709**

Priority

DE 102012107651 A 20120821

Abstract (en)

Performing a biochemical analysis, preferably in space with at least one analyte in a sample (12a) qualitatively and/or quantitatively by a selective binding of an analyte specific pair of a binding substance (14a), which fixes the analyte, and a detection substance (20a) that carries a marker substance for marking the analyte, comprises mixing the sample carrying the binding substance, the detection substance and the marking substance in a reaction vessel (26a), where the mixing step is carried out by mixing bodies (18a). An independent claim is included for an apparatus comprising a body for mixing the sample, the binding substance and the detection substance.

Abstract (de)

Die Erfindung geht aus von einem Verfahren zur Durchführung einer biochemischen Analyse, insbesondere im Weltraum, bei der zumindest ein Analyt in einer Probe (12a-e) qualitativ und/oder quantitativ mittels einer selektiven Bindung eines analyt spezifischen Paares aus einer Bindesubstanz (14a - e, 16b - e) und einer Detektionssubstanz (20a - e, 22b - e) an den Analyten und einer Markierung durch eine Markersubstanz bestimmt wird, und wobei in einem Verfahrensschritt eine Durchmischung der Probe (12a-e), der Bindesubstanz (14a - e, 16b - e), der Detektionssubstanz (20a - e, 22b - e) und der Markersubstanz in einem Reaktionsgefäß (26a-e) erfolgt. Es wird vorgeschlagen, dass die Durchmischung mittels Mischungskörpern (18a; 18d; 18e, 30b-c, 32b-c) bewirkt wird.

IPC 8 full level

**G01N 33/537** (2006.01); **G01N 33/543** (2006.01)

CPC (source: CN EP US)

**G01N 33/5306** (2013.01 - US); **G01N 33/537** (2013.01 - CN EP US); **G01N 33/54326** (2013.01 - CN EP US); **G01N 2035/00336** (2013.01 - US)

Citation (search report)

- [E] EP 2634579 A1 20130904 - ASTRIUM GMBH [DE]
- [X] US 2012178186 A1 20120712 - NIEUWENNHHUIS JEROEN HANS [NL], et al
- [X/DY] US 6100079 A 20000808 - TAJIMA HIDEJI [JP]
- [X] US 2010248258 A1 20100930 - LEE GWO-BIN [TW], et al
- [A] US 2009311724 A1 20091217 - LEVISON STUART [US], et al
- [A] US 2006286563 A1 20061221 - LIN YUH-JIUAN [TW], et al
- [XY] YOUNGEUN KWON ET AL: "Magnetic Bead Based Immunoassay for Autonomous Detection of Toxins", ANALYTICAL CHEMISTRY, vol. 80, no. 22, 15 November 2008 (2008-11-15), pages 8416 - 8423, XP055033445, ISSN: 0003-2700, DOI: 10.1021/ac8010044
- [I/Y] MOSER Y ET AL: "Active superparamagnetic bead manipulation for immunoassays on-chip", THE PROCEEDINGS OF [MICRO]TAS 2008 CONFERENCE : VOLUMES 1 & 2 ; THE TWELFTH INTERNATIONAL CONFERENCE ON MINIATURIZED SYSTEMS FOR CHEMISTRY AND LIFE SCIENCES ; SAN DIEGO SHERATON HOTEL & MARINA, SAN DIEGO, CALIFORNIA, USA, OCTOBER 12 - 16, 2008, CHEMI, 12 October 2008 (2008-10-12), pages 1372 - 1374, XP002680448, ISBN: 978-0-9798064-1-4

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2700948 A1 20140226; EP 2700948 B1 20170830**; CA 2823927 A1 20140221; CA 2823927 C 20170711; CN 103776995 A 20140507;  
CN 103776995 B 20170825; DE 102012107651 A1 20140227; EP 3264086 A1 20180103; JP 2014041122 A 20140306;  
JP 2016011961 A 20160121; JP 6191841 B2 20170906; US 2014057290 A1 20140227; US 9921214 B2 20180320

DOCDB simple family (application)

**EP 13175746 A 20130709**; CA 2823927 A 20130815; CN 201310366311 A 20130821; DE 102012107651 A 20120821;  
EP 17184368 A 20130709; JP 2013168401 A 20130813; JP 2015176840 A 20150908; US 201313969044 A 20130816